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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/779,844	02/18/2004	Gerald W.E. Van Decker	PAT 976-2	9431

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EXAMINER

FLANIGAN, ALLEN J

ART UNIT	PAPER NUMBER
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3744

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/779,844

Applicant(s)

VAN DECKER ET AL.

Examiner

Allen J. Flanigan

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 7,8 and 12-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9-11 and 15-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

Applicant's election with traverse of the species of Fig. 2 in the reply filed on 10/27/2006 is acknowledged. The traversal is on the ground(s) that "the species of Figure 2, Figure 3, Figure 4, and Figure 5 relate to a common inventive concept". This is not found persuasive because it is not clearly understood how applicant is attempting to traverse the examiner's holding of patentable distinction between the species upon which the requirement is based. The instant application is not a national stage application of a PCT, so the standards of unity of invention are not applicable. While it may be true that the patentably distinct species relate to a generic concept (coil on tube heat exchangers), this does not preclude a finding that the different embodiments constitute patentably distinct species.

The requirement is still deemed proper and is therefore made FINAL.

Claims 7, 8, and 12-14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/27/2006.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Due to the amendment to claim 1 there is no antecedent basis for "the coil tubes helically wrapped" in line 3 of claim 1.

Claim 1 will be treated for the purposes of comparison with the prior art as if the amendment substituting "channels" for "coil tubes" was not entered.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 9, 11, and 16-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Hughes et al.

See the Fig. 6 embodiment of Hughes et al., and note the first full paragraph of column 5.

Regarding claims 17-19, the specification indicates that the anchors can comprise conventional means such as brazing or welding. Note lines 52-58 of column 3 of Hughes et al.

Regarding claim 20, recitations concerning the intended method of use of the claimed article cannot distinguish. At most such recitations require the prior art be inherently capable of such use, which the exchanger of Hughes et al. clearly is.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes et al.

The particular direction in which the tubing 32 of Hughes et al. is wrapped around the conduits 14 is considered an obvious matter of design choice /manufacturing preference. Indeed, applicant's statements in the specification regarding this feature clearly indicate that there is nothing critical regarding one orientation vs. the other.

Claims 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Hughes et al. and Janssen.

Janssen shows a tube wrapped around a second tube type exchanger as disclosed in Hughes et al. They show the spacing of the coils being tightly packed which yields maximum of contact area per unit length of the inner pipe (and thus maximum heat conduction potential between the fluids). They also teach that square/rectangular tubing with flattened surfaces permits for minimizing air gaps as well as maximizing the number of turns per length of conduit 202 (see paragraph 107 of Janssen). Thus, it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to reshape the conduits of the Fig. 6 embodiment of Hughes and to space them as

closely together as possible to achieve these benefits. Alternately, it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to add plural adjacent helical coils to the heat exchanger of Janssen to reduce pressure drop as taught by Hughes et al.


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dempsey shows a pair of helical coils wound around a central tube. The remaining references show various designs employing tubing helically wound about a cylindrical tube.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen J. Flanigan whose telephone number is (571) 272-4910. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Allen J. Flanigan
Primary Examiner
Art Unit 3744

AJF